



IN THE CLAIMS:

1. (Currently Amended) A method for monitoring the subsurface under a facility for volatile organic compounds, comprising:

evaluating a facility for applicability of subsurface monitoring of volatile organic compounds;

if subsurface monitoring of volatile organic compounds is appropriate at the facility, determining the location at which to monitor subsurface volatile organic compounds at the facility based on proximity to where volatile organic compound release to the subsurface under the facility is made possible by the facility structure;

installing a volatile organic compound monitoring station at the determined location at the facility;

collecting soil vapor samples using the volatile organic compound monitoring station; and

analyzing the collected soil vapor sample for the presence of volatile organic compounds.

2. (Cancelled).

3. (Original) The method of claim 1, further comprising if volatile organic compounds are present in the collected soil vapor sample, investigating the subsurface under the facility to determine if significant quantities of volatile organic compounds are present.

4. (Original) The method of claim 1, further comprising if volatile organic compounds are not present in the collected soil vapor sample, maintaining data related to the collected soil vapor sample.

25315

CUSTOMER NUMBER

- 2 -

FARA-I-1002ROA

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5. (Currently Amended) A method for installing a volatile organic compound monitoring station for sampling soil gas in the subsurface under a facility, comprising:

creating a surface penetration at a facility;

inserting a monitoring station into the surface penetration, the monitoring station comprising a mounting plate and a generally tubular member extending substantially perpendicularly from the mounting plate; and

forming a seal between the monitoring station and the facility surface, wherein forming a seal between the monitoring station and the facility surface comprises applying a sealant to the facility surface substantially around the surface penetration to facilitate creation of the seal between the monitoring station and the facility surface and positioning the mounting plate on the seal having the generally tubular member extending into the penetration.

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

25315

CUSTOMER NUMBER

- 3 -

FARA-1-1002ROA

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15. (Cancelled)

16. (Cancelled)

17. (Currently Amended) A soil probe for monitoring the subsurface under a facility surface for volatile organic compounds, comprising:

- a monitoring port having an end filter in communication with the subsurface under the facility surface, a mounting plate comprising an aperture, and a neck secured to the mounting plate proximate the aperture;
- a monitoring port cap configured to close the monitoring port to minimize the movement of undesirable materials between the facility and the subsurface via the monitoring port; and
- a sampling adaptor configured to interface with the monitoring port and a sampling pump to allow the withdrawal of a soil gas sample from the subsurface under the facility surface.

18. (Currently Amended) The soil probe of claim 17, wherein:

- ~~the monitoring port further comprising neck is~~ a threaded neck; and
- the soil probe further comprises a securing member engaging the subsurface under the facility surface and having threads corresponding to and configured to interface with the threaded neck of the mounting plate to secure the mounting plate so that the end filter of the mounting plate extends into the subsurface under the facility surface.

19. (Currently Amended) The soil probe of claim 17, wherein:

- the monitoring port is a substantially hollow, generally tubular-shaped member having a threaded interior; and

25315

CUSTOMER NUMBER

- 4 -

FARA-1-1002ROA

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the monitoring port cap has a threaded exterior corresponding to and configured to interface with the threaded interior of the monitoring port and at least one annular sealing member engaging the monitoring port cap and the monitoring port to create a seal and secured to at least one of the monitoring cap and the monitoring port.

20. (Currently Amended) ~~The soil probe of claim 17, wherein:~~ A soil probe for monitoring the subsurface under a facility surface for volatile organic compounds, comprising:

a monitoring port having an end filter in communication with the subsurface under the facility surface;

a monitoring port cap configured to close the monitoring port to minimize the movement of undesirable materials between the facility and the subsurface via the monitoring port;

a sampling adaptor configured to interface with the monitoring port and a sampling pump to allow the withdrawal of a soil gas sample from the subsurface under the facility surface; and

wherein the monitoring port has a locking aperture; and

further comprising a locking tool for use in the installation of the monitoring port, the locking tool having an end corresponding in size and shape to the locking aperture of the monitoring port.

21. (Currently Amended) The soil probe of claim 17, wherein:

the monitoring port cap has a sealing element including a turning recesses recess formed therein; and

further comprising a cap tool for use in the installation of the monitoring port cap, the cap tool having a configuration engageable with the turning recess of the sealing

25315

CUSTOMER NUMBER

- 5 -

FARA-I-1002ROA

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element including at least one turning pins pin corresponding in size and shape to the turning recesses recess of the monitoring port cap.

22. (Original) The soil probe of claim 17, wherein:

the monitoring port cap has at least one sealing means designed to create a substantially liquid and airtight seal between the monitoring port cap and the monitoring port when the monitoring port cap is used to close the monitoring port.

23. (Cancelled)

24. (New) The method of claim 5, further comprising:

providing a monitoring cap having a threaded exterior corresponding to and configured to interface with a threaded interior of the generally tubular member;

providing a sampling adapter having a threaded exterior corresponding to and configured to interface with the threaded interior of the generally tubular member;

providing at least one annular sealing member engaging the monitoring port cap and the generally tubular member to create a seal, the annular sealing member secured to at least one of the monitoring cap the generally tubular member, and the sampling adapter;

threading the monitoring cap into the generally tubular member;

unthreading the monitoring cap; and

threading the sampling adapter into the generally tubular member.

25. (New) The method of claim 5, further comprising:

positioning a securing member within the surface penetration; and

securing the probe within the securing member; and

expanding the securing member to engage the securing member with a wall of the surface penetration.

25315

CUSTOMER NUMBER

- 6 -

FARA-1-1002ROA

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26. (New) The soil probe of claim 17, wherein the end filter comprises a porous material with pore spaces small enough so as to allow the passage of gasses and not allow the passage of soil into the probe.

25315

CUSTOMER NUMBER

- 7 -

FARA-1-1002ROA

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